COMBINED TRANSMITTAL OF APPEAL BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a) (Large Entity)	Docket No. DSCK -1223-C1

In Re Application Of: **EMERSON et al**

Serial No.	Filing Date	Examiner	Group Art Unit
09/884,652	19 JUN 2001	HUNTER	3711

Invention:

CONTROL GOLF BALL - DDH CONTROL

TO THE COMMISSIONER FOR PATENTS:

This is a combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing an Appeal Brief.

Applicant(s) hereby request(s) an extension of time of (check desired time period):

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PATENT

Attorney's Docket No.: DSCK-1223-C1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT: EMERSON et al.
SERIAL NO.: 09/884,652
FILED: June 19, 2001
FOR: CONTROL GOLF BALL DDH STEEL CONTROL
EXAMINER: A. Hunter
ART UNIT: 3711

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APPEAL BRIEF

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TABLE OF CONTENTS

REAL PARTY IN INTEREST

The real part in interest is Dunlop Slazenger Manufacturing LLC, which has been assigned a 100% interest in the invention.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1-24 are pending and the subject of this appeal. No other claims are pending.

STATUS OF AMENDMENTS

All amendments to the claims have been entered. No after-final amendment of the claims was filed.

SUMMARY OF THE INVENTION

The first embodiment of the golf ball according to the present invention is best depicted in Figures 1-7 and 9-10. A modified dodecahedron pattern comprising twelve pentagons is depicted in Figure 2. The placement of ten great circle paths onto the surface of a golf ball to create sixty triangles appears in Figure 4. Figures 9-10 depict

the method of determining the characteristics of the dimples.

A second embodiment of the present invention is recited in independent claim 18 and depicted in Figures 1-10. The rows that subdivide the triangles are exemplified in Figure 8.

The first embodiment of the present invention is exemplified in claim 1 which recites a golf ball having high durability while maintaining feel and distance properties. The golf ball comprises a core 2 and a cover 4 (e.g., Figure 1) with the cover comprising a blend of polymers (see, e.g., pages 12-13 of the detailed description of the polymer blend embodied in the claims). A first polymer has a melt index of about 2 to 10 grams/10 min., a flexural modulus of 60,000 to 80,000 PSI, and a Shore D hardness of 60 to 70. A second polymer has a melt index of about .2 to 2 and a flexural modulus of 2,000 to 8,000 PSI. A plurality of dimples are arranged to coincide with a modified dodecahedron pattern comprising twelve pentagons (Figure 2). The modified dodecahedron pattern is subdivided by ten great circle paths free of dimples that form sixty triangles (Figure 4).

Independent claim 18 is directed to a second embodiment of the invention and is supported by pages 15-18

and Figures 5 and 8 of the specification. The second embodiment differs from the first by further arranging the dimples into rows depicted in Figure 8 and described at page 15, line 5 to produce a different dimple pattern. The second embodiment is a further modification of the first embodiment's modified dodecahedron pattern having ten great circle paths free of dimples.

ISSUES PRESENTED

Issue 1 - Whether claims 1-10, 12-15, 17-20 and 24 are patentable under 35 U.S.C. § 103 over Cadorniga et al. (USPN 5,415,937) in view of Shaw (USPN 4,877,252) and Oka et al. (USPN 5,072,945)?

Issue 2 - Whether claims and 11 and 21 are patentable under 35 U.S.C. § 103 over Cadorniga et al. (USPN 5,415,937) in view of Shaw (USPN 4,877,252), Oka et al. (USPN 5,072,945) and Cadorniga (USPN 5,470,076)?

GROUPING OF CLAIMS

For each ground of rejection, which appellants contest herein, which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand or fall together.

THE ARGUMENT

Prior to discussing each art rejection as Issues 1 and 2, Appellants would first like to bring to the Board's attention the following specific statements made by the Patent Examiner with respect to each art rejection:

> *Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have any number of great circles on a golf ball…*

As argued below, Appellants believe the Examiner's assertion of obvious design choice for "any number of great circles on a golf ball" to be erroneous since none of the applied references disclose, teach or suggest the features of ten great circle paths free of dimples. Specifically the cited references clearly, when combined, teach away from increasing the number of great circle paths free of dimples to enhance flight performance.

The Appellants would like to further bring to the Board's attention the following statement made by the Examiner with respect to each art rejection:

…would be adequate for achieving the applicant's invention simply because the applicant does not state any disadvantages as to why one of the ordinary skill in the art should not use…

As argued below, Appellants believe the Examiner's implied assertion of motivation to produce the applicants' invention being provided by the applicants' failure to "state any disadvantages as to why one of the ordinary skill in the art should not use" to be erroneous method to produce an obviousness rejection since none of the applied references disclose, teach or suggest the specific features claimed by the applicants' that the Examiner suggests as obvious.

The Appellants would like to further bring to the Board's attention the following specific statement made by the Examiner with respect to each art rejection:

As stated above, the applicant never gives any criticality or show that the number of great circles has unexpected results. Even if the results are unexpected, the applicant has the duty to show that the results are unexpected.

As argued below, Appellants believe the Examiner's assertion of obviousness for failing to state "any criticality or show that the number of great circles has unexpected results" to be erroneous since none of the applied references disclose, teach or suggest the features of ten great circle paths free of dimples. Specifically the references cited clearly teach that increasing the number of great circle paths free of dimples is detrimental to flight performance. This unquestionably teaches away from the Appellants' claimed and described invention. To require Appellants to provide evidence of unexpected results in light of the prior art is improper. To properly reject the claims, citation of a reference supporting the Examiner's assertion that ten great circle paths and placement of dimples as directed by the applicants' claims are desirable is believed necessary within the context of withdrawal of all existing rejections in favor of a new ground of rejection.

Issue 1 - Whether claims 1-10, 12-15, 17-20 and 24 are patentable under 35 U.S.C. § 103 over Cadorniga et al. (USPN 5,415,937) in view of Shaw (USPN 4,877,252) and Oka et al. (USPN 5,072,945)?

Each of independent claims 1, 18 and 24 recite a modified dodecahedron pattern having *ten great circle paths free of dimples*.

Contrary to the Appellants' claimed invention, Cardorniga et al '937 patent discloses a golf ball having a cover blend with a high stiffness ionomer with a Shore D hardness of "70 or greater", but no dimple pattern is discussed or taught. The Appellants' cover blend comprises a high stiffness ionomer that has a Shore D hardness of 60 to 70 and is made of a softer ionomer blend than that taught in the '937 patent. The claimed language of the Appellants' range is less than 70 because the term "to 70" does not include 70 and thus the Shore D does not overlap.

The Appellants' specification describes their high stiffness ionomer as a SURLYN® 8150 or equivalent, a softer ionomer that the specific ionomer or its equivalent is not disclosed or taught in the '937 patent which specifically requires a greater Shore D hardness.

Stated differently, the '937 patent discloses or teaches a different blend than that of the Appellants. The '937 patent is relevant only in that it describes general background art of a polymer blending of an ionomer with a higher Shore D than that of the appellants blend. The resultant blends disclosed or taught in the '937 patent results in a stiffer cover than that claimed by the appellants and thus different ball properties.

U.S. Patent 4,877,252 to Shaw discloses a dodecahedron dimple pattern on the surface of a golf ball having six great circle paths free of dimples. The Shaw '252 patent, while teaching a dodecahedron dimple pattern, does not teach the Appellants modified dodecahedron pattern. Column 2, lines 39-44, of the '252 patent are relevant here and reproduced below for convenience of review:

> *FIG. 3 shows a golf ball (indicated generally at 30) having a repeating dimple pattern indicated by chain dotted lines 31, 32, 33, 34 and 35 represent* ***five of the six 'great circles' of the ball, the sixth 'great circle' not being visible*** *in the view shown in FIG. 3).* (Emphasis added)

Stated differently the '252 patent does not teach or disclose the use of ten great circle paths free of dimples.

The totality of the teachings of the '252 patent must be considered to determine if one skilled in the art would be motivated to add additional great circle paths free of dimples. The '252 patent is silent regarding the addition of great circle paths free of dimples.

The '252 patent when further reviewed for the totality of its teachings can be argued to teach away or at least fail to provide any motivation for the use of ten great circle paths free of dimples. Column 1, lines 5-14 are relevant here and reproduced below for convenience of review:

> *It is well known to provide golf balls with a plurality of dimples in the spherical surface of the ball and there have been many previous proposals to distribute those dimples in a repeating pattern. It is* ***understood by those skilled in the relevant art*** *that the dimple pattern, together with any* ***non-dimpled areas, affects the playing characteristics of the ball.*** *In particular, the flight path and flight distance of a golf ball, as well as the degree of air-resistance encountered during flight,* ***can be greatly affected by the dimple pattern.***
>
> *We have now found that the aforementioned playing characteristics can be considerably enhanced by so arranging the dimples on the surface of the ball that at least some adjacent dimples touch or overlap.*
>
> *Accordingly, the present invention provides a golf ball having a plurality of dimples in its spherical outer surface, in which* ***at least 10% of the dimples are so disposed relative to one another that the peripheries of any two adjacent dimples extend inside each other to form an overlapping region.*** (emphasis added)

From the foregoing, it can be seen that Shaw teaches that non-dimpled areas of a golf ball greatly affects the playing characteristics of a golf ball. Shaw does not discuss the desirability of adding additional great circle paths but warns of affecting the golf ball's performance. As Shaw teaches the desirability of overlapping dimples in conjunction with its warning, it is clear that Shaw teaches against or at least provides no motivation to add four more additional great circle paths free of dimples. Increasing the percentage of overlapping dimples and increasing dimple free great circle paths are incompatible on both conceptual and practical levels. As such, Shaw should not be considered as teaching or suggesting an increase in the number of great circle paths free of dimples.

U.S. Patent 5,072,945 to Oka et al. is characterized by the Examiner as "*Oka et al. discloses a golf ball having no dimples intersecting the great circle line to eliminate the difference in the trajectory heights of seam hitting and pole hitting*". This may be the teaching provided by Oka et al. but its relevance to the claims of the Appellants' invention is not understood. Column 1, lines 19-35 are relevant and are reproduced below for convenience of review:

> *In order to improve the aerodynamic characteristic of the golf ball, as disclosed in Oka et al., U.S. Pat. No. 4,813,677,* ***it is preferable to form dimples densely on the surface thereof and reduce the number of great circle zones which intersect no dimples.***
>
> ***However, one great circle zone is inevitably formed on the surface of the golf ball.*** *The golf ball is normally molded by a split metallic mold composed of semi-spherical upper and lower molds, a burr is formed at the junction of the molds, i.e. at a parting line between the upper and lower molds during the molding. Such burr is to be scraped off in a later processing by buffing to form a seam thereat, and therefore, the dimples can not be provided on the seam to facilitate buffing of the burr.* ***In result, the golf ball has on its spherical surface a great circle zone which intersect no dimples*** *even though dimples are densely formed thereon.* (emphasis added)

Oka et al teaches only having one great circle path free of dimples and that additional great circle paths free of dimples are to be avoided because they decrease the density of the dimples. Oka does not disclose any dimple patterns other than a single mold parting line free of dimples with maximized dimple coverage. This is contrary to the claims on appeal, which require a modified dodecahedron pattern and ten great circle paths free of dimples. Oka et al. further supports the Appellants contention that the formation of ten great circle paths free of dimples is not obvious.

Appellants recognize that an incomplete reading of the Cadornigna '937 patent may lead one to view the reference

as teaching the blending of polymers to form a cover that appears to be similar to the Applicants' claimed invention without a closer inspection. A thorough review of the reference reveals that Cadorniga blends utilize polymers with a higher Shore D greater than 70 and they do not teach any dimple patterns.

At best, the combination of Cadorniga and Shaw would result in a golf ball having a harder cover blend, and a dodecahedron pattern with six great circles free of dimples. The Appellants' golf ball combination of a softer cover blend and modified dodecahedron pattern with ten great circle paths free of dimples would not be achieved without employing hindsight reasoning.

Whether or not disclosures in two or more prior art references are properly combinable depends, generally, on whether there is some teaching, suggestion or motivation in those references or elsewhere in the prior art to suggest the desirability of making the combination. The mere fact that it is possible to find isolated disclosures having some individual features that might be combined in a manner that would result in the claimed invention is not enough. There must be something in the prior art itself that suggests the desirability of the claimed combination. It is improper to pick and choose among the individual parts

of various prior art references as a mosaic to recreate a facsimile of the claimed invention using the inventors' disclosure as an instruction book or blue print on how to reconstruct the prior art. To do so is impermissible hindsight reasoning. Additionally, the problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the references in that manner to solve a particular problem. See *In Re Sang Su Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002) and *In Re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

Issue 2 - Whether claims and 11 and 21 are patentable under 35 U.S.C. § 103 over Cadorniga et al. (USPN 5,415,937) in view of Shaw (USPN 4,877,252), Oka et al. (USPN 5,072,945) and Cadorniga (USPN 5,470,076)?

U.S. Patent 5,470,076 to Cadorniga discloses dimples having a dual radius. The Examiner states that it would be obvious to combine Cadorniga '937 with Shaw, Oka and Cadorniga '076 to produce the combination of claims 11 and 21. The Appellants respectfully disagree that the cited combination would teach each and every element of the claims because this combination still fails to address the

deficiencies of independent claims 1 and 18 that require ten great circle paths free of dimples.

The Examiner's reasons for combining Cadornigna with Shaw are as follows "*Shaw does not have to teach ten great circles and was not used to teach ten great circles*". The Appellants are in agreement with the Examiner's statement regarding Shaw's failure to teach ten great circles free of dimples. In light of that comment, claims 1-24 should have received a notice of allowance and the application passed to issue because according to the Examiner's own admission, the combination of references does not teach each and every element of the claimed invention. As required under 35 U.S.C. § 103, a prima facie case of obviousness is not established unless a combination of references teaches each and every element of the rejected claims.

When considering whether evidence exists in a cited reference, there is no rule known to Applicants that requires the overall teachings of a reference to be discounted due to the absence of a particular element in the claims under consideration. To the contrary, a prior art reference must be considered for all it teaches and discloses including disclosure that teaches away from the invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 U.S.P.Q. 657 (Fed.

Cir. 1985), cert. Denied, 475 U.S. 1017 (1986). To do otherwise would allow references to be considered piece meal, and an applicant's disclosure to be considered as a blue print, the "essence of hindsight". *In Re Dembiczak,* 175 F.3d at 999 (internal citation omitted).

The Examiner restates the reasons why the combination of Shaw with Oka render the Appellants' claimed dimple pattern obvious in the Advisory Action. Relevant excerpt of that paper are reproduced below:

> *Shaw teaches a dodecahedron pattern for enhancing the flight performance of the ball. Oka et al. teaches that the placement of dimple with respect to the great circle line influences the trajectory height when hitting. Clearly spelled out, having dimples not touching the great circle lines would influence the trajectory height, and optimize the flight performance provided to the golf ball by the dodecahedron pattern of Shaw. No teaching away is seen within the combinations. Furthermore, the applicant has not provided any factual evidence in which shows that the results of the invention are unexpected, and therefore, is still considered to be a design choice.*

In light of the above-noted Examiner's position, the Appellants will respond to each point and show why a valid prima facia case of obviousness has not been established. Assuming all the factual assertions above are correct the Shaw invention has no connection with that claimed by the Appellants. The Appellants are in agreement with the Examiner that Shaw discloses a dodecahedron pattern for enhancing flight performance of a golf ball. Those skilled in the art of golf ball aerodynamics including the teaching provided in Shaw that the dimpled and non-dimpled areas greatly affect the flight performance of a golf ball.

Assuming one skilled in the art had both the Shaw and Oka references in front of them one could never produce the Appellants' claimed invention without completely ignoring the teaching of one when considering the other and arguably disregarding some of the teaching from both of the references. Taking the Examiner's position of the teachings provided by the combination of Shaw and Oka, to create the Appellants' claimed invention it would still be impossible. Assuming the theory provided about "trajectory height" was correct to provide motivation to one skilled in the art it must be tied to a physical manifestation i.e. dimples.

An example of suggested motivation to tie the theory to an actual physical structure was identified by the Examiner in the Office Action made final. The motivation is alleged to be presented in Shaw at column 1, lines 55-60, which reads:

> *The pattern of a golf ball according to the* ***present invention can be so arranged*** *that when the ball is played,* ***the dimple pattern will influence the axis of spin****. Thus, it is possible to design the flight characteristics of such a ball to have a high degree of control and accuracy.*

A review of this quoted statement produces a contrary conclusion to that of the Examiner because Shaw does not state anywhere that the addition of more great circle paths free of dimples would influence the axis of spin in a positive manner. Shaw fails to show or suggest, either singly or in combination with the other references, a golf ball having anything close to ten great circle paths. Accordingly, the cited art fails to teach the instant inventions combination and thus the claims should be allowed.

The Examiner is correct that "*Oka et al. discloses a golf ball having no dimples intersecting the great circle line to eliminate the difference in the trajectory heights of seam hitting and pole hitting*". This may be the teaching provided by Oka but its relevance to the

Appellants' claimed invention is not understood. Oka clearly teaches the use of only one dimple free great circle path at the mold parting line. Oka teaches the positioning of dimples to minimize the effect of having one great circle path free of dimples. Oka thus teaches away from having more than one great circle path free of dimples.

Once again, the legal requirement to provide specific evidence of a teaching, suggestion or motivation to combine what is alleged to be commonly known with a prior art reference has not been met. See, *In Re Hans Oetiker,* 977 F.2d 1443, 1446-47; 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992) (taking notice of common everyday mechanical concepts is not sufficient to obviate an invention without giving reasons why). This basis for finding claims 1-15, 17-21 and 24 obvious should be removed for this reason. Claims 16 and 22-23 have not be rejected by the Examiner as obvious.

Regardless of the reasoning presented by the Examiner regarding "trajectory heights" the combination of Oka with Shaw will not teach the Appellants' claimed invention. If the Examiner's proposed combination did result in the Applicants' claimed invention, it would only be through

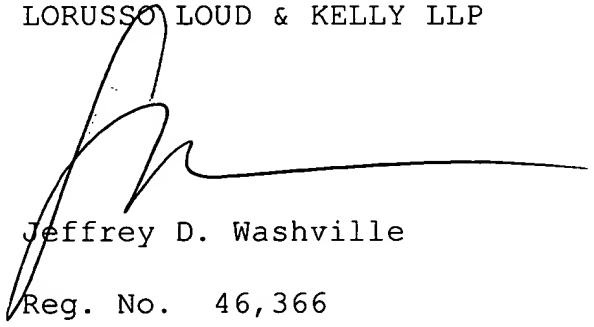
improper hindsight reasoning and not the teaching of the combination of references cited.

CONCLUSION

For the reasons advanced above, each claim is patentable and should be passed to allowance. Reversal of all rejections is courteously solicited. It is respectfully requested that all rejections be withdrawn and the application be passed to issue.

Respectfully submitted,

LORUSSO LOUD & KELLY LLP



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